

In re Application of Ragsdale et al.
Application No. 10/615,283

AMENDMENTS TO THE CLAIMS

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1. (Currently Amended) An additive suitable for addition to a polyol reactant used use in the manufacture of a polymer foam, the additive comprising:

(a) a polyol,

(b) a benzotriazole, the benzotriazole being present in the additive in an amount of about 0.5 to about 6.0 parts per hundred parts of the polyol (php),

[[~~(b)~~]] (c) a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure, the lactone-based antioxidant being present in the additive in an amount of about 0.05 to about 1.0 php, and

[[~~(c)~~]] (d) a third fourth component selected from the group consisting of:

(i) about 0.05 to about 1.0 php of a secondary phenylamine,

(ii) about 0.05 to about 2.0 php of a hindered phenol, and

(iii) a combination of about 0.05 to about 1.0 php of a secondary phenylamine and about 0.05 to about 2.0 php of a hindered phenol.

2. (Currently Amended) The additive of Claim 1 wherein said ~~third~~ fourth component is a secondary phenylamine.

3-16. (Canceled)

17. (Currently Amended) The additive of Claim 1 wherein said ~~third~~ fourth component is a hindered phenol.

18. (Currently Amended) The additive of claim 1, wherein said ~~third~~ fourth component is a combination of a secondary phenylamine and a hindered phenol.

19. (Currently Amended) The additive of claim 1, wherein said additive comprises:

(a) a polyol,

(b) about 0.8 to about 2.0 php of a benzotriazole,

[[~~(b)~~]] (c) about 0.1 to about 0.7 php of a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure,

[[~~(c)~~]] (d) about 0.1 to about 0.5 php of a secondary phenylamine, and

In re Application of Ragsdale et al.
Application No. 10/615,283

[[[d)]] (e) about 0.1 to about 1.5 php of a hindered phenol.

20. (Currently Amended) The additive of claim 19, wherein said additive comprises:

(a) a polyol,

(b) about 0.8 to about 2.0 php of a benzotriazole,

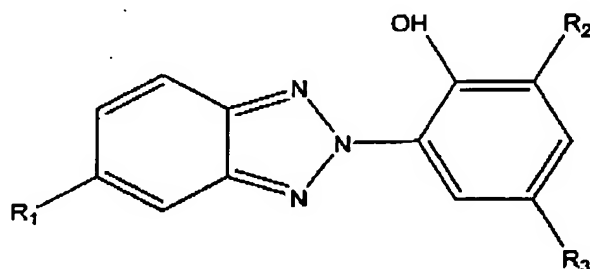
[[[b)]] (c) about 0.15 to about 0.3 php of a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure,

[[[c)]] (d) about 0.1 to about 0.5 php of a secondary phenylamine, and

[[[d)]] (e) about 0.25 to about 0.65 php of a hindered phenol.

21. (Previously Presented) The additive of claim 1 wherein said benzotriazole conforms to the structure of Formula (I)

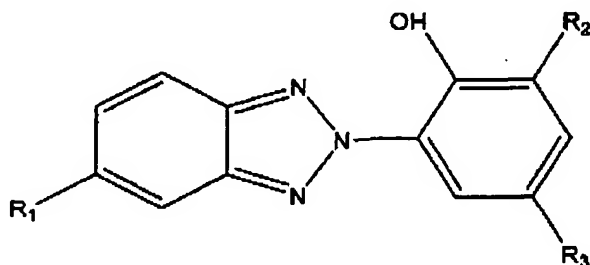
(I)



wherein R₁, R₂, and R₃ are individually selected from the group consisting of hydrogen, groups conforming to the formula C_xH_yO_z, where x, y, and z are from 0 to 30, and halogens.

22. (Previously Presented) The additive of claim 19 wherein said benzotriazole conforms to the structure of Formula (I)

(I)

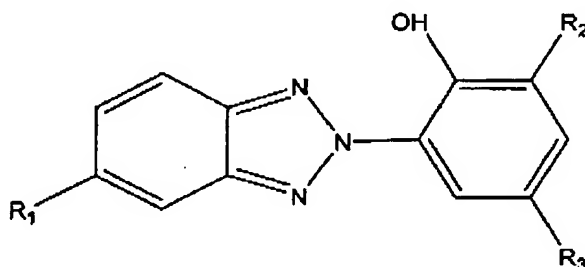


In re Application of Ragsdale et al.
Application No. 10/615,283

wherein R_1 , R_2 , and R_3 are individually selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

23. (Previously Presented) The additive of claim 20 wherein said benzotriazole conforms to the structure of Formula (I)

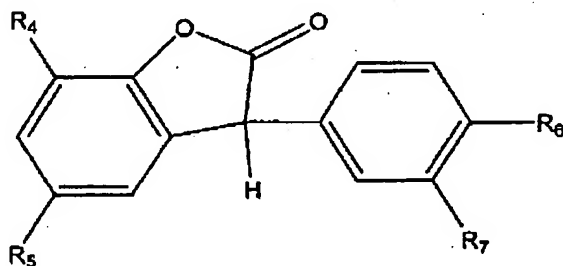
(I)



wherein R_1 , R_2 , and R_3 are individually selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

24. (Previously Presented) The additive of claim 1 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

(II)

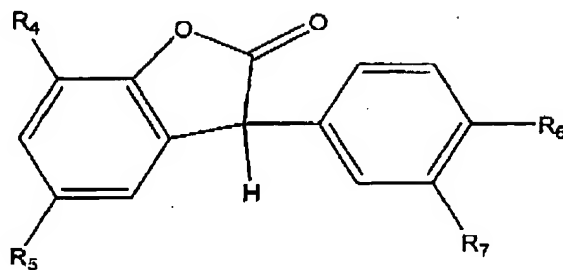


wherein R_4 , R_5 , R_6 , and R_7 are individually selected from the group consisting of hydrogen and C_{1-30} alkyl groups.

25. (Previously Presented) The additive of claim 19 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

(II)

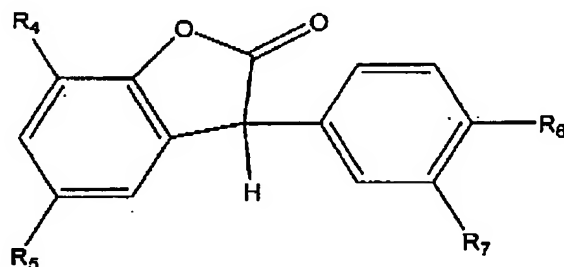
In re Application of Ragsdale et al.
Application No. 10/615,283



wherein R_4 , R_5 , R_6 , and R_7 are individually selected from the group consisting of hydrogen and C_{1-30} alkyl groups.

26. (Previously Presented) The additive of claim 20 wherein said lactone-based antioxidant conforms to the structure of Formula (II)

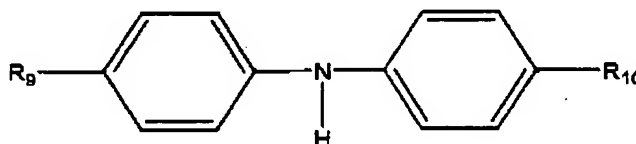
(II)



wherein R_4 , R_5 , R_6 , and R_7 are individually selected from the group consisting of hydrogen and C_{1-30} alkyl groups.

27. (Previously Presented) The additive of claim 1 wherein the secondary phenylamine conforms to the structure of Formula (IV)

(IV)

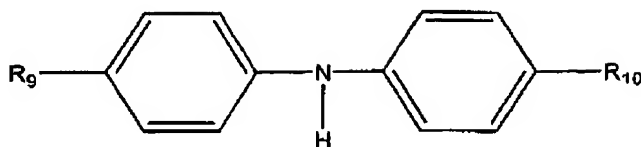


wherein R_9 and R_{10} are individually selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

28. (Previously Presented) The additive of claim 19 wherein the secondary phenylamine conforms to the structure of Formula (IV)

(IV)

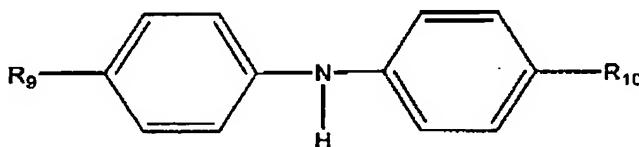
In re Application of Ragsdale et al.
Application No. 10/615,283



wherein R_9 and R_{10} are individually selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

29. (Previously Presented) The additive of claim 20 wherein the secondary phenylamine conforms to the structure of Formula (IV)

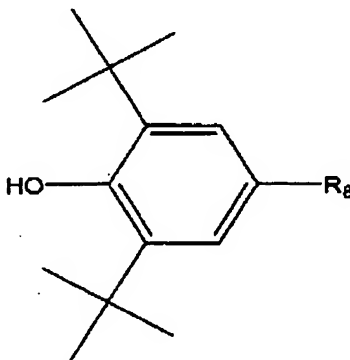
(IV)



wherein R_9 and R_{10} are individually selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

30. (Previously Presented) The additive of claim 1 wherein the hindered phenol conforms to the structure of Formula (III)

(III)

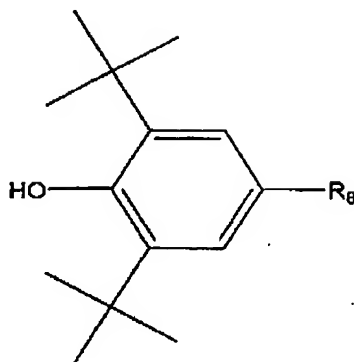


wherein R_8 is selected from the group consisting of hydrogen, groups conforming to the formula $C_xH_yO_z$, where x , y , and z are from 0 to 30, and halogens.

31. (Previously Presented) The additive of claim 19 wherein the hindered phenol conforms to the structure of Formula (III)

In re Application of Ragsdale et al.
Application No. 10/615,283

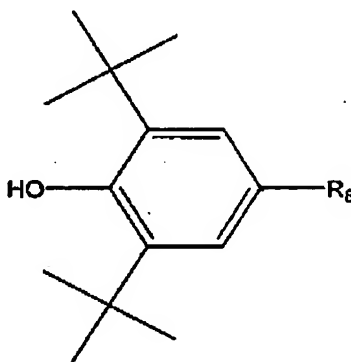
(III)



wherein R₈ is selected from the group consisting of hydrogen, groups conforming to the formula C_xH_yO_z, where x, y, and z are from 0 to 30, and halogens.

32. (Previously Presented) The additive of claim 20 wherein the hindered phenol conforms to the structure of Formula (III)

(III)



wherein R₈ is selected from the group consisting of hydrogen, groups conforming to the formula C_xH_yO_z, where x, y, and z are from 0 to 30, and halogens.

33. (New) A composition comprising:

- (a) a polyol,
- (b) a benzotriazole,
- (c) a lactone-based antioxidant having a 3-phenylbenzofuran-2-one structure, and
- (d) a fourth component selected from the group consisting of secondary phenylamines, hindered phenols, and combinations thereof.

In re Application of Ragsdale et al.
Application No. 10/615,283

34. (New) The composition of claim 33, wherein the composition comprises:
- (a) the polyol,
 - (b) the benzotriazole in an amount of about 0.5 to about 6.0 parts per hundred parts of the polyol (php),
 - (c) the lactone-based antioxidant in an amount of about 0.05 to about 1.0 php, and
 - (d) a fourth component selected from the group consisting of:
 - (i) about 0.05 to about 1.0 php of a secondary phenylamine,
 - (ii) about 0.05 to about 2.0 php of a hindered phenol, and
 - (iii) a combination of about 0.05 to about 1.0 php of a secondary phenylamine and about 0.05 to about 2.0 php of a hindered phenol.